

Perspectives about Family Meals from Parents in Low-income and Minority Households

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Carrie L. Hanson

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Adviser:
Steven Harris, PhD, LMFT

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Dedication

For every child who has ever struggled with weight
I know it hurts
I also know it gets better

Abstract

Cross-sectional and longitudinal studies have shown that family meals are associated with childhood healthful eating behaviors, family cohesion, and positive development outcomes for children. However, few studies have examined the family meals in low-income and minority families and no studies have qualitatively examined whether there is a difference in the protective influence of family meals between households with overweight/obese children and households with nonoverweight children. The current study aimed to identify family meal-level characteristics of low-income and minority households and to examine whether those meal-level characteristics differ in households with or without an overweight/obese child. The current qualitative study included 118 parents who participated in Family Meals, LIVE!, a mixed-methods, cross sectional study designed to identify key family home environment factors related to eating behaviors that increase or minimize the risk for childhood obesity. Parents (92% female) were racially/ethnically and from low-income homes. Data were analyzed using inductive content analysis. Results from the current study suggest that parents from African American, White, and mixed race/other homes as well as parent with and without overweight/obese children have many similar (e.g., why parents have family meals, the use of technology during meals) and some different (e.g. what adults like about family meals, mealtime rules, how culture influences meals) perspectives regarding family meals. Findings from this study highlight the need to further explore the subtle differences within and between families of different ethnic groups and families with and without overweight/obese children to discover what nuanced home environmental factors influence childhood health outcomes.

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Childhood overweight and obesity is considered one of the most serious public health challenges of the 21st century (World Health Organization, 2002) and is the focus of many public health efforts in the United States (McKinnon, Reedy, Berrigan, & Krebs-Smith, 2012; Wojcicki & Heyman, 2010). Rates of childhood overweight and obesity have increased significantly over the last three decades and in 2012 more than one third of children in the United States were considered either overweight or obese (National Center for Health Statistics, 2012; Ogden, Carroll, Kit, & Flegal, 2014) with low-income and minority youth experiencing substantially higher rates of overweight and obesity than their Caucasian peers (May, Freedman, Sherry, & Blanck, 2013; Wang & Beydoun, 2007). Overweight and obesity is associated with adverse health outcomes during childhood, including an increased risk for physical and mental health problems such as difficulty breathing, hypertension, and insulin resistance (Ebbeling, Pawlak, Ludwig, 2002; World Health Organization, 2002) and emotional difficulties such as negative self-esteem (Schwimmer, Burwinkle, & Varni, 2003; Swartz & Puhl, 2003) depression, and anxiety (Deckelbaum & Williams, 2001). With the known adverse physical and mental health outcomes and the associated healthcare costs of overweight and obesity (Tsai, Williamson & Glick, 2010), addressing factors that protect against or contribute to childhood overweight and obesity is important.

While there appear to be multiple contributing factors related to childhood overweight and obesity, national committees agree that there needs to be further research on the behavioral and environmental causes of overweight and obesity (U.S. Department of Health and Human Services, 2001). In children under the age of 12, research suggests that the home environment plays a critical role in a child's access to healthful foods and

physical activity (Kumanyika, 2008; Kumanyika, Parker, & Sims, 2010). Home environmental determinants of childhood obesity identified in the literature include: parent feeding practices, parenting style, availability and accessibility of healthful foods in the home, social interactions around food, frequency of family meals, parental modeling of eating and physical activity, and amount of TV watching (Berge, 2009; Berge, Wall, Bauer, & Neumark-Sztainer, 2010; Berge, Wall, Loth & Neumark-Sztainer, 2010; Lindsay, Sussner, Kim, & Gortmaker, 2006; Mennalla, Nicklaus, Jagolino, & Yourshaw, 2008; Rhee, De Lago, Arschott-Mills, Meht, & Davis, 2005).

Child Weight Status and Family Meals

As part of the home environment, family meals have been shown to be associated with health outcomes, including child weight status. Cross-sectional and longitudinal studies show that children who eat frequent family meals consume more fruits and vegetables (Cason, 2006; Christian, Evans, Hancock, Nykajaer, & Cade, 2013; Gable & Lutz, 2000; Neumark-Sztainer, Hannon, Story, Croll, & Perry, 2003; Videon & Manning, 2003), less saturated fat (Gonzales, Marshall, Heimendinger, Crane, & Neal, 2002) and have better overall diet quality (Gillman, et al., 2000). Studies have also found family meals are associated with lower levels of extreme weight-control behaviors (Neumark-Sztainer, Eisenberg, Fulkerson, Story & Larson, 2008; Jaffa, Honig, Farmer & Dilley, 2002) and better psychosocial health (Eisenberg, Olson, Neumark-Sztainer, Story & Bearinger, 2004; Rocket, 2007). Research examining the association between family meal frequency and child weight status has shown mixed results (Koletzko & Toschke, 2010), with some studies showing an inverse effect between family meal frequency and body mass index (BMI) (Berge et al., 2014a; Anderson & Whitaker, 2010; Gable, Chang,

& Krull, 2007) and other studies finding no association (Woodruff, Hanning, McGoldrick, & Brown, 2010; Wurback, Zellner, & Kromeyer-Hauschild, 2009). However, few studies have examined the protective influence of family meals in low-income and minority families and no qualitative studies have examined whether there is a difference in the protective influence of family meals between households with overweight/obese children and households with nonoverweight children. Thus, more research is needed that can examine family members own perspectives of individual and family-level characteristics of family meals that are protective for child health in low-income and minority households and in households with children with different weight status.

Low-Income and Minority Households and Family Meals

Although family meals appear to be an important contributing component of children's health (Fiese & Schwartz, 2008), there are limited studies examining family meals in low-income and minority households. Of the studies conducted, results show that family meals vary by socioeconomic status (McCurdy & Gorman, 2010; Neumark-Sztainer et al., 2003) and race and ethnicity (Rollins, Belue, & Francix, 2010; Skala et al, 2012), and that lower income and ethnically diverse families (Blake et al., 2009, Neumark-Sztainer, et al., 2003) participate in fewer family meals and receive fewer child health benefits from having family meals (Flores, Tomany-Korman, & Olsen, 2005; Fitzpatrick, Edmunds, & Dennison, 2007; Neumark-Sztainer et al., 2003).

More studies are needed to examine whether family meals operate differently in low-income and minority households. It is important to consider the culture and traditional practices related to food and eating that are important to many minority

families. For example, food is an expression of culture as well as a way to preserve family and community tradition (Caprio et al., 2008). The cultural context of food includes the types and amounts of foods served, the traditional meanings and uses of foods, social interactions around food (Kumanyika, 2008), as well as beliefs of how food relates to health (Jerome, Peltz, & Kandel, 1980). These cultural elements may play a large role in whether and how family meals are carried out in low-income and minority households

Meal-level Characteristics that Interfere with Optimizing the Protective Nature of Family Meals on Child Health

Even though family meals may be protective for child health, research has suggested that many families encounter challenges and barriers to carrying out family meals. For instance, Fulkerson, Story, Neimark-Sztainer, and Rydell (2008) found that many parents of school-aged children are overwhelmed when it comes to meal preparation and planning. While other research has identified scheduling conflicts (e.g., work, children's extracurricular activities), time pressure, work characteristics, and negative child behaviors (e.g., picky eating, acting out during meals) as challenges to having family meals (Blake et al., 2009; Fulkerson et al., 2011; Koulouglioti, Cole, & Moskow, 2011; Neumark-Sztainer et al., 2000; Hammons & Fiesae, 2011; Hoerr et al., 2005; Horodynski & Arndt, 2005). Some studies suggest that these challenges are more common for low-income and some ethnic groups (Hammons & Fiese; Koulouglioti, Cole, & Moskow). In addition research has shown that watching television during meals is negatively associated with fruit and vegetable intake (Fitzpatrick, Edmunds, & Dennison, 2007; Boutelle, Birnbaum, Lytle, Murray, & Story, 2003; Matheson, Killen,

Wang, Varady, & Robinson, 2004). Some research suggests that when compared to White families, low-income black and Hispanic families watch more television during meals (Fitzpatrick, Edmunds, & Dennison, 2007). It is important to identify these specific meal-level characteristics that may impede family meals occurring in low-income and minority households in order to tailor interventions with these families to increase the frequency of family meals.

In summary, while quantitative results on family meals have shown that more frequent family meals are protective for child health, additional qualitative research is needed to flesh out the existing research to provide more in-depth insight into why family meals appear to be protective for some children but not for others. For example, there are many questions to be answered about family meal-level characteristics such as: what types of rules operate during family meals in regards to eating behaviors, media use, and behavior/manners that may distinguish between family meals being protective for households with overweight or obese children versus households with normal weight children. To date, qualitative research on family meals has focused on the importance of family meals and the barriers to having family meals. However, very few of these studies have included low-income, minority participants and none of these studies have compared households with overweight children and households with nonoverweight children. Thus, qualitative research is needed to examine in depth meal-level characteristics that may be protective for child overweight/obesity in households with low-income and minority populations and with families with and without an overweight/obese child.

The main aims of this study are to: (1) examine family meal-level characteristics from the perspective of parents from low-income and minority households and (2) to examine whether these meal-level characteristics differ in households with or without an overweight/obese child. The research questions are: (1) How do parents from low-income and minority households view family meals (e.g., why they have family meals, likes/dislikes about family meals)?, (2) What family rules do parents from low-income and minority households have around mealtimes (e.g., spoken/unspoken rules, media use, food etiquette, eating behaviors)?, and (3) How do parents from low-income and minority households think their culture influences family meals (e.g., what is eaten, importance of family meals, frequency of family meals)?

Understanding how low-income and minority families with and without overweight/obese children view family meal-level characteristics will provide a more refined picture of family meal factors that may exacerbate or protect against childhood overweight/obesity. Results can be used to inform clinical recommendations and interventions for healthcare and public health workers who work with children and their families to know whether family meal interventions need to be tailored differently for families with and those without overweight/obese children. Additionally, because this research is qualitative, it will enhance current quantitative findings by delving into the everyday realities of family meals and finding the nuances of families' lived experiences that are difficult to deduce from quantitative methods.

Theory

Family Systems Theory (FST) guides the current study design and research questions. Based on the systemic interactions work of Bertalanffy (1968) and Bateson

(1979), FST acknowledges that family members cannot be understood in isolation from one another. FST posits that the whole is greater than the sum of its parts and each part simultaneously influences and is influenced by other parts. Families, therefore, are fundamentally more than simply a group of separate individuals. Families are composed of individuals who are organized into smaller units or subsystems (e.g., marital, parental, sibling) that in turn, organize into the larger family system (Minuchin, 1974). Individuals and subsystems are interdependent, so a problem at an individual or subsystem level will affect the family unit as a whole. As a result, the family processes, or way of managing the problem, will either contribute to adaptation, or individual and/or relational dysfunction (Walsh, 2011). Therefore, in terms of childhood overweight/obesity, the overweight/obesity becomes a systemic problem that belongs to the entire family, not just pathology or maladaptive behavior belonging only to an individual child. Furthermore, the family system's feedback around the child's health problem becomes an automatic process that can maintain or disrupt the problem (Minuchin et al., 1975). Additionally, FST provides a framework for understanding the importance of family meals in relation to childhood obesity because it emphasizes the importance of considering the family as a whole, rather than just the individuals, when considering adaptive and maladaptive relationships and processes and takes into consideration the beliefs, values, roles, and rules that govern families. As a family routine and ritual, family meals are laden with beliefs, values, roles and rules that govern what, where, and how families eat and interact with each other.

Method

Sample

The proposed study utilizes data from the Family Meals, LIVE! study (Berge, et al., 2014) for qualitative analyses. Family Meals, LIVE! was conducted through the University of Minnesota during 2012-2013. It was mixed-methods, cross-sectional study designed to identify key family home environment factors related to eating behaviors that increase or minimize the risk for childhood obesity. Participants were recruited through primary care clinics (N = 4) within the Department of Family Medicine and Community Health (DFMCH) in the Minneapolis/St. Paul Minnesota area. A flier was sent to the child's home inviting the family to participate in a study looking at the family and home influences on child eating behaviors and weight. Participants and their families were eligible if the child was between the ages of 6-12 years old, both the child and his/her parent/guardian and family members spoke and read English, and the family ate regular dinner meals together (to ensure that families who "normally" ate family meals together were recruited). Families participated in two home visits, completed a survey, participated in a primary caregiver interview, gave dietary recalls, and were part of an observational measure of family functioning described elsewhere (Berge, et al., 2014). Families who completed the study were compensated with an iPad 2. The University of Minnesota's Institutional Review Board Human Subjects Committee approved all study procedures.

The study included 120 children and their primary caregiver (see Table 1). The children were between the ages of 6 and 12 (mean age = 9 years) and 47% were girls. The primary caregivers were mostly women (92%) with a mean age of 35 (SD: 7.5 years;

range: 25-65 years). The racial/ethnic backgrounds of the participating children were 64% African American/Black, 13% Caucasian, and 23% mixed/other. More than 50% of the children were from very low SES households (<\$20,000 per year). A little over 50% of the caregivers were unemployed or stay-at-home caregivers. Based on findings in the family meals literature, recruitment was stratified by weight status. Fifty percent of the sample was classified as overweight/obese (BMI = \geq 85th percentile) and 50% were nonoverweight (BMI >5th and <85th percentile) (Barlow, 2007).

Interview Development and Data Collection

The research team formulated interview questions with guidance from peer-reviewed research on family meals and findings from the Family Meals, LIVE! pilot study (Berge, Hoppmann, Hanson & Neumark-Sztainer, 2013). A qualitative interview guide was developed and used to help elicit caregivers' perspectives on eight different family meal related topics (see Table 2). Interviews followed a semi-structured, open-ended question format using a phenomenological approach. This allowed for flexibility in the interview format and did not set any a priori hypothesis but rather, allowed themes and categories to emerge inductively as the data were coded (Henderson, 2006; Patton, 2002). A trained member of the research team conducted all interviews with the primary caregiver during the second home visit. Open-ended questions probing techniques were used to elicit expansion of participant responses. All interviews were audio-recorded, transcribed verbatim and reviewed for accuracy.

Interviews lasted between 6 to 41 minutes. Due to technical difficulties two interviews were not recorded. Of the 118 collected interviews, 50% (n = 59) of them

were from homes with overweight/obese children and 50% (n = 59) were from homes with nonoverweight children.

Data Analysis

Audio-recorded interviews were transcribed verbatim and coded using an inductive content analysis approach (Elo, & Kyngas, 2007). Content analysis is a systemic and objective way to describe and quantify phenomena by making replicable and valid inferences from data that provides knowledge, new insights, and a representation of facts (Krippendorff, 1980). Inductive content analysis is used when knowledge about a phenomenon is limited (Lauri & Kyngas 2005) and takes specific observed instances and then combines them into a larger whole (Chinn & Kramer, 1999) by first creating open codes, then condensing them into axial codes, and finally distilling them down into selective codes or main categories (Elo & Kyngas, 2007).

Two members of the research team independently read and coded the interviews using NVivo 10 software (NVivo 10, 2014, QSR International Pty Ltd). Inter-rater reliability was established with both coders coding 10% of the interviews. Consistency between the coders was assessed using the formula: number of agreements divided by total number of agreements plus disagreements (Miles & Huberman, 1994). Inter-coder reliability was 97 to 99%. Discrepancies were discussed between the two coders and the larger research team until 100% consensus was achieved (Miller & Crabtree, 1999).

Coding of the interviews was done through line-by-line open coding (Glaser, 1978) to establish initial codes and capture key thoughts and concepts. Next, the codes were sorted into open categories using an axial coding process to organize parent responses by content area and to identify response themes and concepts. Next the coders

utilized axial coding to separate the broad categories into subcategories to organize participant responses by content area and to identify major themes and concepts. The data in each group were further defined, developed, and refined through selective coding into main categories. Core concepts were identified and sub-categories were collapsed to form a storyline that describes the experience of family meals for the sample as a whole. After completing the coding, the interviews were stratified into two groups based on child weight status. Fifty-nine interviews were categorized in the overweight/obese (BMI = $\geq 85^{\text{th}}$ percentile) group and 59 interviews were categorized into the nonoverweight group (BMI $> 5^{\text{th}}$ and $< 85^{\text{th}}$ percentile). Based on recommendations from qualitative research handbooks, themes that differed between the two weight status groups by 10% or greater (Berg, 1998; Crabtree, & Miller, 1992) were considered important differences and will be discussed.

Ethical Considerations

Participants signed IRB approved consent forms and were told orally that their participation was voluntary and that they could withdraw from the study at any time. Because of the sensitivity of recorded material, research staff reinforced to participants that their anonymity would be maintained and that research published from their interviews would be de-identified, as noted in the written consent forms. All names in the results section have been omitted.

Results

Results from the qualitative analysis are reported in themes grouped according to the two aims of this study and organized around the eight questions asked during the in-home interviews (see Table 3). The first aim explores parents' perspectives about family

meal-level characteristics including: 1) how parents view family meals (e.g., importance of family meals, purpose of family meals, likes/dislikes about family meals)?, (2) what family rules exist around mealtimes (e.g., spoken/unspoken rules, media use, food etiquette, eating behaviors)?, and (3) how does culture influence family meals (e.g., what is eaten, importance of family meals, frequency of family meals)? The second aim explores whether there are similarities or differences in the family meal-level characteristics found in families with overweight/obese children and families with nonoverweight children.

Aim 1: Family Meals in Low-Income and Minority Families

Research Question 1: How do parents view family meals? Parents responded to five questions about family meals (see Table 3) including why they have family meals, as well as, what they personally liked and disliked about family meals and what they perceived their child(ren) liked and disliked about family meals.

Why do families have family meals? Parents provided insight on the following themes: (a) family meals as a time to communicate, (b) family meals as a time to connect, (c) family meals as a tradition, and (c) family meals as a time to eat.

Family meals as a time to communicate. Fifty-five percent of the parents (n = 65) stated that they have family meals because it is a time to sit together and talk. Many commented that family meals give them the opportunity to take a break from their busy schedules of work and school and spend time with their children to catch up on the day. Many parents made statements such as “If you don’t eat dinner together, there’s no communication at all because he goes to school during the day,” (African American,

female, age 32) and “That’s the only time that we can sit and have...talks” (African American, female, age 34)

Parents also noted that because of the designated time to sit and talk, topics of conversation were often broader. In addition to being a time to talk about what happened over the course of the day, parents also noted that family meals were a time when family members could express what was on their mind, talk about problems, and discuss things they generally do not talk about. One participant said:

It just gives us time to come together and just talk about our days and how everything went and just different things on our mind (African American, female, age 31).

Another parent said:

It’s [family meals] a time to be together and talk about our day...we discuss things that we don’t get to discuss throughout the day or the week, and that’s why I know it’s important...(African American, female, age 29).

Family meals as a time to connect. Almost 30 percent of the parents (n = 35) reported that they have family meals because it is a time to connect. Parents discussed connection in terms of being together, bonding, showing love, and connecting intergenerationally.

I think it’s the most intimate thing that you can share with someone and so that’s what I do with my family. Whether it’s holidays, birthdays, or just us being at home or people coming over on Sundays...it’s the most intimate thing that you can share with anyone, whether it be your family or other people. I think it shows love (African American, female, age 42).

Family meals as a tradition. Twenty-three percent of parents (n = 28) noted that they have family meals because it is a tradition. A higher percentage of White (30%) and mixed/other race (26%) parents endorsed this theme compared to African American/Black parents (20%), but overall it was the third most common response. Those who endorsed tradition viewed family meals as ways to transgenerationally promote closeness and communication among family members. For example, parents identified the importance of sharing meals with their children the way family meals were shared with them. One participant stated:

My husband and I, we believe, that you know if we have a meal together it brings us closer, because we grew up like that, you know, having a family meal together. So we're kind of close with our siblings so we figure it'll work for the kids (mixed race/other, female, age 29).

Another parent stated:

We have family meals together because that's the way I was raised, and coming to a family meal is an important time to gather and talk, and talk about current events of the day, talk about our day, it was something that was expected, and we were there so I continue that tradition with our family (White, female, age 52).

Family meals as a time to eat. Twenty percent of parents (n = 24) identified "eating" as a reason for having family meals. African American/Black (22%) and mixed race/other (22%) parents endorsed this more often, in comparison to White parents (13%). Most of the parents who identified eating as a reason they have family meals talked about it in conjunction with communication and connection.

We like to eat food...family meals like helps us bond. We talk about our day, it gives us that like together time, because a lot of times we're in separate rooms, so that's the time that we actually sit together (African American, female, age 33).

Those who did not see it as a time of connection often laughed after their response "to eat". For them, it appeared that family meals are a way to meet a parental obligation.

It's legal; I have to feed the children. It's the law (laughter) (African American, female, age 36).

Some noted that family meals and eating helps promote health by using it, as a time to ensure there is access to healthy food.

The family meal is important for my family to eat food, healthy food (White, female, age 33).

What do parents like about family meals? The themes that emerged as to why parents liked family meals were similar to the reasons they gave about why they have family meals (see above): (a) spending time together as a family, (b) time to communicate, and (c) eating food.

Spending time together as a family. Almost 50% of the parents (n = 57) stated that what they liked about family meals was spending time with other family members. Many parents used the phrases "quality time", "family time", and "bonding time" in their responses. They reiterated that family meals were a time to take a break from work and school and physically be in the same space. Being physically together and focused on a shared event appeared to promote connection and getting to know family members.

You get to see the bad things, the good things, everything. You know, however they feel when they get to the table is exactly what you'll see today. So you'll always find something of significance (African American, female, age 30).

Time to communicate. Forty-six percent ($n = 54$) of the parents stated that what they liked about family meals was the opportunity to communicate. This was higher among the White parents (61%) when compared to the African American/Black parents (42%) or mixed race/other parents (39%), but overall it was the second most common theme. Again, parents responded with similar statements about communication as they did to the question about reasons why they have family meals. Parents stated that what they liked about family meals was that it gave them “time to be together and just talk...to catch up” (mixed race/other, female, age 33) and a “chance to just sit down and relax and just talk to (their) kids.” (African American, female, age 31). Many noted that the focused time allowed for conversation without distraction and gave them time to “sit down and talk, pretty much in the quiet, more personal setting” (African American, female, age 32).

Enjoying eating food with children and monitoring child eating. Nineteen percent of the parents ($n = 22$) noted that their favorite thing about family meals was eating. Of those parents, the majority of them (24%) were African American/Black. Beyond the necessity of having to eat, parents talked about eating in terms of enjoying watching their children eat. For example, one parent said,

I like cooking, I like making sure my kids eat, and checking in with them during the meal, or seeing if they like the food that I make (African American, female, age 41).

For other parents, family meals allowed them an opportunity to monitor what and how much their children eat.

I like to see the kids eating... I like to just watch them eat and see how much they're eating and what they're eating so I can kind of keep track of everything (mixed race/other, female, age 27).

What do parents dislike about family meals? When asked what they did not like about family meals, 38% of the parents (n = 45) said nothing. The next most common themes were: (a) chaos, (b) the work it takes to pull off a family meal, and (c) children's picky eating.

Chaos. Seventeen percent (21) of the parents stated that they did not like the chaos involved with family meals. This response was more common among the White (22%) and mixed race/other (26%) parents compared to African American/Black parents (14%). Parents described chaos in various ways. For some parents, it was trying to fit family meals into a busy schedule. One parent said:

We both...are gone during the day, and the girls are gone during the day, so you have so much you have to fit into an evening, when they're in school and stuff like that and there are activities and so it's like, sometimes you're just like "Come on! Come on! We gotta go! We gotta go!" You know, so that's sometimes the hard part (White, female, age 35).

Other parents talked about chaos in terms of children's behaviors at the dinner table that included trying to get children come together, noise at the table, bad manners, playing during meal times, and the mess created.

The work it takes to pull off a family meal. Fifteen-percent (n = 18) of parents talked about disliking the work that goes into family meals. This was highest among the White parents (26%) as compared to the African American/Black parents (12%) or mixed race/other parents (13%). When referring to the work it takes to pull off a family meal, parents talked about planning, preparing, and cleaning up after the meal. Of these three themes cooking was the most popular with 10 parents endorsing it. Parents talked about having busy schedules and having to go from one thing right into the next.

I mean, you get home from work and it's like damn, you gotta jump right into the next thing. So that's probably the biggest downer (White, female, age 38).

Other parents noted the timing issue along with pressure to make a good meal,

It's a lot of prep work to do, just the time to think about what you're cooking, and to make sure that it's food that the kids want to eat, and just the whole meal planning. It's just—it's a lot of work (White, female, age 43).

Children's picky eating. Fourteen percent of the parents (n = 17) endorsed picky eating as being one of the things they did not like about family meals. Parents defined picky eating as a child not liking what is being served and complaining about it. They expressed frustration about picky eating and some described how they manage this at the table.

Half the time one of them doesn't like whatever I'm making. So sometimes I do say okay, you don't have to eat it. I'll make you some Spaghetti O's or whatever. But most of the time I'm like, you need to try it at least (White, female, age 37).

What do parents think children like about family meals? Parents reported on what they perceived their children liked about family meals. The parental report mirrored

what they themselves said they liked about family meals, (a) being together as a family, (b) having time to talk, and (c) eating food.

Being together as a family. Forty-five percent of the parents ($n = 53$) stated that what their children liked most about family meals was being together as a family. This was higher among the White (57%) and other/mixed (57%) parents when compared to the African American/Black parents (36%). Family meals were a designated time for everyone to sit together, share a meal, and a time when the children had the devoted attention of their parents. One participant said:

Coming together, everybody sitting together, mommy and daddy right there next to them, answering any question that they have, eating the same thing they are (White, female, age 36).

Another participant stated:

I think they like the whole fact of us just being together...because we're just chilling out, you know and most of the time I'm at work, or doing my own things, they're in their room...you know, so it's just one time we can all get together and they can just let loose (African American, female, age 34).

Having time to talk. Thirty-six percent ($n = 42$) of the parents indicated that their children like family meals because it is a time when they can talk and share about their day.

They really like to talk to us. I mean you can kind of see that in their face. You know that they really enjoy telling us about their day, you know they're communicating. They're using their words...whether it was a good day or a bad

day, and we can kind of work through it so that our evening doesn't get so, you know, frustrated (White, female, age 38).

Parents also talked about children enjoying being able to talk about different things while having their parents' full attention.

They do like to tell me stuff, a lot of stuff, when they talk about eating and everything, so they probably like it because they can tell me stuff, I'm not running around doing other stuff then, but sitting down eating (African American, female, age 32).

Eating food. Twenty-nine percent ($n = 34$) of the parents stated that their children enjoyed eating. The majority of the parents who endorsed this were African American/Black ($n = 24$). Parents described eating in positive terms often referring to their child's preference for home cooked food. One African American mother (age 29) stated, "They love the way I cook. They're always telling me 'Mom, we like the way you cook'."

What do parents think children dislike about family meals? When asked about what their children did not like about family meals two main themes emerged, (a) food related issues, (b) sitting. The third most common theme was nothing (19%)

Food related issues. Thirty-two percent ($n = 38$) of parents responded that their children do not like the types of foods that are served, particularly vegetables. Many parents also noted that their children do not like being told that they have to eat what is served.

(They don't like) when I tell them to eat their food, they don't like eating vegetables a lot, so when I make them, they just get angry (mixed race/other, female, age 28).

Sitting. Twenty-six percent of the parents stated that their children do not like to sit. The parents stated that the physical act of sitting was difficult for their children.

My kids are very outgoing, so they're always moving and jumping around so you can kind of see them fidgeting at the table...they just want to get up and go (African American, female, age 32)

Others talked about family meals taking away from a child's play and television time, They really don't like to sit down because...it takes their playtime away from their games...so they try to hurry up and eat and then get away from the table (mixed race/other, female, age 71).

Research Question 2: What family rules exist around mealtimes? Parents answered two questions about family meals and rules. One question asked about rules in general, and the second question asked parents how they handled electronic devices during family meals.

What spoken and unspoken rules exist around family meals? When asked about spoken and unspoken rules around family meals three themes emerged: (a) food related rules, (b) rules around behaviors during meals, and (c) mealtime expectations.

Food related rules. Food related rules were endorsed by 75% (n = 88) of the parents with White (83%) and mixed race/other (78%) parents endorsing it more than African American/Black parents (69%). The majority of those who acknowledged having food rules had more than one rule. The most common food rules evolved around

children having to eat something. For some parents this meant children were required to try everything being served (44%) and for other parents this meant that children were required to eat at least one thing that was being served (19%). Parents explained this in terms of wanting their children to be exposed to a variety of foods, acknowledging that children's food preferences often change and food that they dislike today they may like tomorrow, and not wanting their children to ask for food after the meal, thus causing more work for the caregivers. One parent said:

We do enforce making sure that they eat something. You know, we're not going to accept not eating anything at all....We don't have too many strict rules about it but we do...make sure that they eat. They can't just you know get up and not eat and they know why too. They said, "that's okay, I don't want to be hungry in 20 minutes". And you know it's showing consideration for their parents (African American, female, age 42).

Another parent stated:

Just eat some of it...try it at least. Because they're kind of picky and...I try to whip out a couple of new things every now and again...they're like "Uh, what is that?" And I'm like, "Just try it." And then usually they end up pretty much liking it (African American, male, age 50).

Many parents used the phrase "clean plate club" when asked about family meals rules. Thirty-two percent ($n = 28$) of the parents stated that they were not a part of the "clean plate club" and 13% ($n = 11$) said they were part of the clean plate club or talked about their children being required to eat everything that was on their plate. More White parents (35%) said they did not subscribe to the clean plate club than did mixed

race/other parents (26%) or African American/Black parents (19%). Those who said they did not subscribe to the “clean plate club” often mentioned that it was a choice they made and that they wanted their children to be able to recognize when they were full.

However, percentages were similar between racial/ethnic groups regarding those who did have the clean plate rule. One participant said:

We don't have the clean plate club rule at all. That was a conscious choice that we made very early on that we weren't going to do that (White, female, age 52).
I just tell them, pretty much, eat until you get full. Sometimes that does involve them not finishing their plate and everything, and I understand that because I only want them to eat to where they get full anyway. I don't want them overeating or anything so (African American, female, age 28)

Those who did ascribe to the clean plate club tended to give shorter answers such as “they must eat everything on their plate” while a few talked about the moral implications of not eating the food on your plate. For some it appeared to be a generational rule used to mitigate waste.

I make her eat all because (I) remember we was taught that if you, whatever you put on your plate, you eat (African American, female, age 28).

For others it was about not wasting food while other people went without.

I'll tell the older two like 'You guys should eat that food or don't throw that in the garbage because there's people that can't eat, that people's not eating every day so we need to eat. If we're not eating, we can be giving it away; don't throw it in the garbage (African American, female, age 30).

Other food rules included limiting beverages until after children had eaten their food (17%) and requiring children to finish their food or clean their plates before they were allowed to have dessert or other snacks (14%). Both of these rules appeared to be a way for parents to get their children to fill up on dinner instead of beverages and sweets. One participant stated:

Well, the drinking aspect, my mom did the same thing to us, because we would, she would figure out that if we drank our drinks first, we'd get full too fast. And then we didn't want to eat our food anymore. So that kind of just rubbed off, as far as with them two, you eat your food first, and then you can drink your drink...that just makes it easier so then they eat their food first without saying "Oh, I'm full" and all you did was drink your juice or drink your water (African American, female, age 31)

Rules around behaviors during meals. The second most common theme related to rules was behaviors during the family meal. Thirty percent ($n = 35$) endorsed rules that governed behaviors. Of the behaviors listed, the most commonly mentioned one was manners. Examples of manners mentioned by parents included not talking when there is food in one's mouth, not having elbows on the table, using eating utensils, sitting in a chair, and leaving when excused.

Mealtime expectations. The third most common theme related to rules was mealtime expectations. Nineteen percent of the parents ($n = 22$) endorsed having expectation rules such as helping to clean up after a meal and that dinner is an event where everyone attends.

How do families handle the use of electronic devices during family meals?

Parents were asked how they handle electronic devices or distractions at mealtimes. If parents did not mention specific devices they were asked specific questions about television, telephone, computer, and radio use, however not all parents responded about each device.

Of those who did respond, 41% (n = 48) said they allowed television to be on during family meals and 40% (n = 47) said they did not. More African American/Black (45%) and White (43%) parents endorsed allowing television than did the mixed race or other parents (22%).

Parents who allowed television, as well as those who did not, both viewed the television as a distraction. For some who allowed television the distraction was a way for family members to be together but focused elsewhere:

Sometimes that's just what everybody wants to do. Everybody just wants to be in their own world, even though we're still eating together, so sometimes I just let it happen (African American, female, age 41).

For others the television was contingent on the child's ability to eat and watch at the same time.

My daughter has a bad habit of watching TV while she eats, so by me saying, "Well, I'm going to cut the TV off, if you don't eat," then she'll say, "Okay, Mom" and then she'll eat and I'll just leave the TV on. Or I'll put her at a different position of the table to where she can't see the TV (African American, female, age 33).

For those who said they do not allow television during family meals, many stated they did not want their children distracted from eating. One participant stated:

Well, my family, whenever we eat, we don't put on the TV, ever...because if you eat with the TV on, my kids, they will not eat. They will just watch TV. And so I don't have time for that. So I just turn off the TV (mixed race/other, female, 26).
They try to eat too fast to get away from the table right away, so we turn off the TV, we turn off the game, and they cannot have it until we're all through (mixed race/other, female, age 71).

Another parent stated:

The second most common electronic device present during family meals was the telephone/cellphone. Twenty-five percent ($n = 29$) of parents endorsed using the telephone/cellphone during family meals however more parents 46% ($n = 54$) said they do not allow telephones/cellphones during mealtimes. A higher percentage of White parents (35%) endorsed using the television than did their African American/Black (22%) or mixed race or other (22%) counterparts. Of those who used the phone they noted it was mostly adults who were using the phones for phone calls as well as text messaging.

I'm not going to lie to you. I'm probably the bad role model when it comes to texting at the table. I will sit there and text the whole mealtime. "Eat your food" (she imitates tapping the keyboard) you know, I'm bad with my cell phone (African American, female, age 30).

Of those who stated that telephones/cellphones were not allowed at the dinner table, most gave short responses such as "there's no texting or anything. They usually don't even bring their phones in there with them," (mixed race/other, female, age 32) but

a few expounded on why they were not allowed, “I try not to use the phone at dinnertime as well, because the conversations are starting...and I’ve missed the whole dinner so I don’t like them to have anything at the table” (African American, female, age 29).

Very few parents (4%, $n = 5$) allowed computers, tablets, or handheld gaming devices to be present at mealtimes. Twenty-five percent of the parents ($n = 30$) directly stated that computers, tablets, or handheld gaming devices were not allowed during meals. Those who endorsed computers, tablets, or handheld gaming devices at the table answered with a simple “yes” while those who said “no” answered with fuller answers, some explaining that computers, tablets, and handheld gaming devices are distractions that take away from what a family meal is about.

I feel like they have plenty of time to do that stuff, that doesn’t need to happen around mealtime ever, just, it’s not necessary, it’s such a small amount of time at the end of the day where we’re all sitting down eating, they don’t need that stuff. They just don’t (African American, female, age 42).

Another parent stated:

No electronics at the table. It’s time to communicate and see how our week went...it’s their time to bring any issues that they forgot to tell us about, events that are coming up and remind us of them (White, father, age 47).

Research Question 3: How does culture influence family meals? Parents were asked an open-ended question about how their culture influenced their family meals. Most parents answered the question based on their family of origin, while others referenced their ethnic background. Three main themes emerged as to how culture

influences family meals: (a) importance of sitting down and eating together, (b) types of food served, and (c) do the opposite of tradition.

Importance of sitting down and eating together. The most prominent theme as to how culture influences family meals was the importance of sitting down and eating together. Thirty percent of the parents ($n = 35$) endorsed this. This was more commonly endorsed by White (57%) and mixed race/other (35%) parents, compared to African American/Black parents (20%). Most stated that they grew up in families where the mealtime expectation was to sit together as a family and eat. Oftentimes parents stated that mealtimes were a time to talk and a way to show love.

I think it's the way I was raised. I mean, we were raised that we all had dinner together, you have your food groups, you eat and talk, you know, it's kind of like the importance of the day, the end of the day (White, female, age 45).

Another parent said:

In African Americans, family meals are very important because a lot of times in like history of not having a lot of money that cooking is how you show your love for your family and so to be able to sit and enjoy the food together is what's important (African American, female, age 32).

Types of food served. The second most common theme was that culture influenced the types of foods that were served. Nineteen percent ($n = 23$) endorsed this with mixed race/other parents (35%) endorsing it more than White (22%) or African American/Black (14%) parents. Those who stated that the types of foods they serve is influenced by culture often gave examples of foods that were eating in their childhood homes.

Fried chicken, we ate so much chicken I just think we would turn into a bird one day (laughs). And my kids, they say the same thing too. We eat baked chicken, fried chicken, boiled chicken, barbequed chicken, any way I can make chicken, that's how I make it (laughs) (mixed race/other, female, age 39)

Another parent said:

(We) grew up in a very standard American home that was very meat and potatoes eating and both my parents grew up on farms so it was really, you know, you have a substantial meal with you know your four food groups and stuff like that (White, female, age 43).

Other parents talked about foods that they identified as being common in their identified ethnic group.

Like traditional African American dishes, my family likes fried chicken, they like collard greens, they like macaroni and cheese, like a lot of Southern dishes, I do make a lot of that (African American, female, age 30).

Another parent stated:

Well, we eat a lot of beans and rice as a staple. We usually eat a variety of foods but it usually seems to be more from my cultural heritage, Mexican food (mixed race/other, female, age 39).

Doing the opposite of tradition. Eighteen percent ($n = 21$) of parents stated that they do the opposite of their cultural heritage and tradition. Parents who stated that they do things differently than their family culture did so for various reasons. For some it was difficult to maintain the routine of regular family meals where everyone is expected to sit at the table and eat.

Our upbringing was totally different. Everybody had to sit down to eat all their food at the table and we'd talk and all that stuff. I try to continue but I mean things change, people change so it is kind of hard to stick with you know the things that mom and dad used to do (African American, female, age 36).

For others, they stated that they did not have family meals together as a child and wanted their children to experience something different.

Growing up, we didn't have family meals...the kids just ate and that was it. We didn't really sit around adults and do all that and so for me like I said before, it's just a time that I can show my kids some love, I can show my family love with food (African American, female, age 42).

I don't really recall us really sitting down eating together because a lot of times parents was at work and I done the cooking...for my little sisters and brothers and we just made our plates and we just ate wherever. So I really don't remember us eating together a lot of times...but I just make my family do it because that's just what I prefer (African American, female, age 36).

For other parents, the choice not to follow family tradition was because they did not think their family tradition promoted health, or they found the experience of family meals to be miserable.

My upbringing...it was different. So I'm trying something different. It was very strict for me and for generations in my family...I want her to enjoy the time. I don't want her to eat or take eating as, you know, kids tend to eat a lot when they're sad, depressed or whatever. I don't want her to do those things, I just want her to know when it's dinnertime, or breakfast, let's enjoy this. This is

something that we do together, or I always say my favorite line, “This is made with love”. It took me a long time to get out of it though because I was so stuck on my culture, soul food, soul food, soul food. Well, I realize I can’t really do all that, because it’s not just my weight, my health, it’s my daughter...I have to think about her health so I stepped back (African American, female, age 31).

Another parent said:

I think it’s important, but I also don’t feel that it should be forced. When I was raised, I was forced and we hated it. My sister and I hated it. And I think that might have been, it might have a lot of why I don’t force it all the time. You know, you eat when you want, if you’re hungry (mixed race/other, female, age 40).

Aim 2: Family Meals and Child Weight Status

When examining whether themes analyzed above were similar or different between households with or without overweight/obese children by 10% or greater (see data analysis section), results indicated that the majority of themes were endorsed similarly. However, there were some notable differences including how parents viewed family meals, what family rules exist around family meals, and how culture influences family meals.

How do parents view family meals? Twelve percent more (61% to 49%) parents with nonoverweight children stated that they have family meals because it offers the family time to communicate. Additionally of interest, answers given by parents with overweight/obese children in their households regarding communication as a reason for having family meals were shorter with lesser depth compared to parents with

nonoverweight children. Both groups were similar on describing other reasons for having family meals and used words such as “together”, “sharing”, “talking”, and “bonding” when describing their family meals.

Second, 14% more parents with nonoverweight children (42% compared to 29%) reported that their children liked family meals because they enjoyed communicating with family members compared to parents with overweight/obese children. However, both groups were similar in their description of how their children liked having their attention, enjoyed talking about their day, and overall conversing as a family during family meals.

The largest difference between the two household groups was related to how parents answered what their children disliked about family meals. Twenty-one percent more parents with overweight/obese children (36% compared to 15%) noted that their children did not like sitting down for meals. Similarities between the groups included, both groups stating that their children would rather be playing than sitting down to eat, and that the physical process of sitting was also difficult for them.

What family rules exist around mealtime? The two groups differed on having rules related to behavior/manners during meals. Twelve percent more parents with nonoverweight children (36% compared to 24%) noted that they have specific rules in regards to being allowed to leave the table when told, and rules around talking and topics of discussion during mealtimes. Of the small number of parents who stated they made their children eat everything on their plate/clean plate club, 12% more were parents with overweight/obese children (15% compared to 3%). Similarities between the two groups included responses related to family rules and the use of electronics during meals. Parents in both groups endorsed food related rules with the most frequency.

Additionally, the two groups were similar on their rules around electronic devices being used during mealtimes. Furthermore, they were equal in their use and non-use of phones during meals as well as their use of computers, tablets and handheld games. The two groups varied slightly when it came to television, with 10% more parents with nonoverweight children (46% compared to 36%) stating that the television was allowed to be on during family meals. Both groups described eating meals while watching television as well as having the television on but not paying attention to it.

How does culture influence family meals? Twelve percent more parents with nonoverweight children (36% compared to 24%) endorsed that they sit down and have family meals because that is what they did in their families of origin. Additionally, 12% more parents with overweight/obese children (24% compared to 12%) stated that they do the opposite of their culture and tradition when it comes to family meals. Furthermore, the three main reasons identified for why parents do things differently with family meals from their own parents were similar between the two households. For example, the most popular response was that family meals were overly strict when they were children and they wanted a more relaxed atmosphere in their homes. The other two most common responses were they did not have family meals as children and wanted to implement it with their children and they currently eat different foods than their families of origin.

Discussion

Results of the current study indicate several meal-level characteristics that low-income and minority families identify related to reasons for having family meals, rules around family meals and cultural influences of family meal. Additionally, results showed many similarities and some differences among low-income and minority households with

and without overweight/obese children which is comparable to existing cross-sectional research on family meals. Results of the study both corroborate and extend previous research on family meals.

First, as previous studies have found, family meals mean more to families than simply meeting the biological need of eating. All three racial/ethnic groups and household groups stratified by child weight status viewed family meals as a way to grow closer, nourish relationships, and carry on important traditions through communication and connection. This reflects previous research conducted with socioeconomically and ethnically diverse samples that found that family meals were an opportunity to spend time together, talk, and share an experience (Berge, Hopmann, Hanson & Neumark-Sztainer, 2013; Fulkerson, Story, Neumark-Sztainer, & Rydel, 2008; Hoerr, Utech, & Ruth, 2005; Jarret, Bahar, & Kersh, 2014; Tubbs, Roy, & Burton, 2005, the National Center on Addiction and Substance Abuse, 2005). However this study also found that low-income and minority houses also identified having family meals to “eat”. This adds to the literature by identifying the importance low-income and minority parents place on the act of feeding and nourishing their children.

Additionally, meal-level characteristics identified as challenges (e.g., picky eating, cost of food, work preparing meals) to carrying out family meals in previous studies (Blake et al., 2009; Fulkerson et al., 2011; Koulouglioti, Cole, & Moskow, 2011; Neumark-Sztainer et al., 2000; Hammons & Fiesae, 2011; Hoerr et al., 2005; Horodynski & Arndt, 2005) were also endorsed by parents in the current study. While more White and mixed race or other parents noted chaos was a problem, and more White parents endorsed disliking the work it takes to pull off a family meal when compared to the other

ethnic groups, all of the groups endorsed picky eating equally. Only one participant noted the price of food was a problem. This suggests that families of different ethnic groups as well as families with and without overweight/obese children, face similar challenges with carrying out family meals.

Rules during family meals varied slightly among ethnic groups with White parents consistently endorsing more rules than the other two ethnic groups. Food related rules were the most common among all ethnic groups and weight categories. Rules used to address picky eating (e.g., required to try food, having one more bite), rules to manage child's food consumption (e.g., clean plate club, not clean plate club), and rules where food was used as a reward or punishment (e.g., no dessert until finish food, limiting beverages until after meal) were the most common food related rules. This suggests that parents of children from different ethnic groups as well as families with overweight/obese children try to manage family meals in similar ways and adds to the already established body of literature that shows picky eating is a common problem parents face (Fulkerson, Story, Neumark-Sztainer, & Rydell, 2008; Mascola, Bryson, & Agras, 2010). Additional research has shown that food rules, such as parents using food as a reward or punishment, adversely affects positive eating behaviors in children and is related to childhood obesity (Spruijt-Metz, Linquist, Birch, Fisher, & Goran, 2002) and may contribute to binge-eating and dietary restraint behaviors (MacBrayer, Smith, McCarthy, Demos, & Simmons, 2001; Puhl & Schwartz, 2003). Therefore further research is needed to explore effective ways for parents to manage picky eating without over managing what their children consume.

The use of technology varied slightly among ethnic groups. More White parents stated phone use was allowed during meals than the other ethnic groups. While some research has shown higher rates of television use among African American/Black families when compared to White families (Fitzpatrick, Lynn, Edmunds, & Dennison, 2007), the reported usage in this study was the same for both groups. Television use for the mixed race or other group was half of that of the African American/Black, or White groups. While previous research indicates that television usage is higher among overweight/obese children, our findings showed that television use was higher among the nonoverweight group than the overweight/obese group. Like previous research studies, these findings indicate that electronic distractions (e.g., phone, television) are common during family meals and often used as a form of distraction (Fitzpatrick, Lynn, Edmunds, & Dennison, 2007).

Culture influenced family meals in the areas of sitting down and eating together, the types of foods served, and doing the opposite of tradition. Ethnic and weight groups differed slightly on how their culture influences their family meals. For African American/Black and White parents, sitting down and eating together was the most common response. While mixed/other parents most commonly spoke about the foods they served. More parents with overweight/obese children endorsed doing the opposite of their cultural tradition, while more parents with nonoverweight or obese children endorsed the importance to sitting down and eating together. The ritual of sitting down together and the types of food served are examples of cultural beliefs and patterns that have been discussed in the literature (Caprio et al., 2008). However, no research has been done on why people do the opposite of their culture. While the parents in this study

provided several reasons, such as doing something that promoted more health, this is an area where a more pointed qualitative study could delve into the decision to include, or disregard, cultural traditions and look at the benefits and disadvantages of going against one's culture.

While differences existed between cultural and weight status groups, none of the differences were greater than 20%. This suggests that different ethnicities as well as families with and without overweight/obese children may view and conduct family meals similarly. These results may help destigmatize families of different ethnic groups or families who have overweight/obese children. Based on study results, all families valued family meals for similar reasons, had similar likes and dislikes, function around the same rules, and view cultural influences similarly. Based on these results, it may be acceptable for family-based interventions to be universally designed instead of tailoring to each ethnic group or to families with or without overweight/obese children, which could be a public health cost savings.

These results also highlight the need to further explore the subtle differences within and between families of different ethnic groups and families with and without overweight/obese children to discover what home environmental factors influence childhood health outcomes. If families view that they are doing everything right, it may be difficult to persuade them of the need to do things differently.

Strengths and Limitations

Strengths and limitations of the current study need to be taken into consideration when interpreting the results of the study. First, the use of a qualitative design allowed for identifying themes from parents regarding how they view family meals. Second, this

study included a large qualitative sample ($n = 18$) of low-income and minority parents, which is not commonly done. This allowed for an exploration of how different low-income ethnic families viewed family meals. Third, this study was designed to pre-stratify families by weight status. This allowed for having enough families in each weight status group to explore similarities and differences between families with and without overweight/obese children.

Some of the limitations include this study's focus on only the qualitative experience of these parents. Including the entire mixed-method data could have strengthened this study by reinforcing or challenging the findings. Another limitation is the unequal number of parents in each ethnic group. There were more African American/Black parents than White or mixed race or other parents. Having an equal number of parents in each ethnic group may have shown additional findings.

Conclusion

This study found that parents of low-income and minority households as well as parents with and without overweight/obese children have many similar (e.g., why parents have family meals, the use of technology during meals) and some different (e.g. what adults like about family meals, mealtime rules, how culture influences meals) perspectives regarding family meals. Findings from this study highlight the need to further explore the subtle differences within and between families of different ethnic groups and families with and without overweight/obese children to discover what nuanced home environmental factors influence childhood health outcomes.

Table 1: *Demographic Characteristics of Parents and Children in Family Meals, LIVE!*

Target Child	%	(n)
Sex		
Female	47%	(56)
Male	53%	(64)
Race		
African American/Black	64%	(77)
White	13%	(15)
Mixed/Other	23%	(28)
Age (years)		
mean (sd)	8.9	(3.3)
BMI		
Obese ($\geq 95\%$)	30%	(36)
Overweight (85% to $< 95\%$)	20%	(24)
Non-overweight (5% to $< 85\%$)	50%	(60)
Primary Caregiver	%	(n)
Sex		
Female	92%	(110)
Male	8%	(10)
Race		
African American/Black	62%	(74)
White	19%	(23)
Mixed/Other	19%	(23)
Age (years)		
mean (sd)	34.8	(7.5)
Household	%	(n)
Number of people living in house		
2	13%	(16)
3–4	36%	(43)
5–6	40%	(48)
≥ 7	11%	(13)
Work		
Full Time	31%	(37)
Part Time	18%	(21)
Unemployed/Stay at Home Caregiver	51%	(61)
Missing	1%	(1)
Socio-Economic Status		
Low ($< \$20,000$)	52%	(62)
Low-Middle ($\$20,000$ to $< \$35,000$)	21%	(25)
Middle ($\$35,000$ to $< \$50,000$)	11%	(13)
Upper Middle ($\$50,000$ to $< \$75,000$)	10%	(12)
High ($\$75,000$ & greater)	6%	(7)
Missing	1%	(1)

Table 2: *Question Guide for Semi-Structured Interviews*

Question
1. What are some reasons why you have family meals?
2. What do you like about family meals?
3. What DON'T you like about family meals?
4. What do your children like about family meals?
5. What DON'T your children like about family meals?
6. Some families have spoken and unspoken rules during mealtimes, such as you can't leave the table until you have finished everything on your plate, or you don't have to eat everything that is served as long as you try it. What are some of your spoken and unspoken rules?
7. How does your family handle electronic devices or other distractions at mealtimes?
<ul style="list-style-type: none"> • Are family members allowed to watch TV, play computer games or listen to the radio during dinner mealtimes? • Are family members allowed to talk on the phone, answer phone calls during mealtimes? • Are family members allowed to text during mealtimes?
8. How does your cultural heritage inform your views about what is eaten at family meals, the frequency of family meals, behavior at family meals and the importance of family meals?

Table 3: *Interview Questions Used to Answer Research Questions*

Research Question	Family Meals, LIVE! Interview Questions
1. How families view family meals (e.g., importance of family meals, purpose of family meals, likes/dislikes)?	<ul style="list-style-type: none"> • What are some reasons why you have family meals? • What do you like about family meals? • What don't you like about family meals? • What do your children like about family meals? • What do your children not like about family meals?
2. What family rules exist around mealtimes (e.g., spoken/unspoken rules, media use, food etiquette, eating behaviors)?	<ul style="list-style-type: none"> • Some families have spoken and unspoken rules during mealtimes, such as you can't leave the table until you have finished everything on your plate, or you don't have to eat everything that is served as long as you try it. What are some of your spoken and unspoken • How does your family handle electronic devices or other distractions at mealtimes?
3. How does culture influence family meals (e.g., what is eaten, importance of family meals, frequency of family meals)?	<ul style="list-style-type: none"> • How does your cultural heritage inform your views about what is eaten at family meals, the frequency of family meals, behavior at family meals and the importance of family

Table 4: *Major Themes and Categories*

Research Question	Major Themes	Categories
1. How to parents view family meals?	Why parents have family meals	Family Meals as a time to communicate Family meals as a time to connect Family meals as tradition Family meals as a time to eat
	What parents like about family meals	Spending time together as a family Time to communicate Enjoying eating food with children and monitoring child eating
	What parents dislike about family meals	Chaos The work it takes to pull off a family meal Children's picky eating
	What parents think children like about family meals	Being together as a family Having time to talk Eating food
	What parents children dislike about family meals	Food related issues Sitting
2. What family rules exist around family meals?	Spoken an unspoken rules	Food related rules Rules around behavior during meals Mealtime expectations
	How parents handle electronic devices	Television is a welcome distraction Television contingent on child being able to watch and eat at the same time Television not allowed due to distraction from eating Parental telephone use allowed
3. How does culture influence family meals	Carry on cultural tradition	Importance of sitting down together Types of food served
	Not carrying on tradition	Do the opposite of tradition

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Appendix A: Dissertation Proposal

A Qualitative Analysis of Family Meals: Are there Differences Between Households with
Overweight and Nonoverweight Children?

Carrie L. Hanson

University of Minnesota

ABSTRACT

Childhood overweight and obesity affects over a third of the nation's youth and is considered a serious public health challenge. Previous research shows that factors within the home food environment, including family meals, are protective against childhood obesity. While quantitative results on family meals have identified risk and protective factors in the home food environment, additional qualitative research is needed to flesh out the existing research and to provide more in-depth insight into why family meals appear to be protective for some but not for others. The primary objective of this study is to identify family meal similarities and differences between ethnically/racially diverse families with overweight/obese children and families with nonoverweight children. The proposed qualitative study uses a stratified sample of families to identify whether there are similarities and/or difference in family meals in households with overweight/obese children and households with nonoverweight children. The proposed study will use inductive content analysis to answer three research questions related to how households see family meals (e.g., importance of family meals, purpose of family meals, likes/dislikes), rules around mealtimes (e.g. spoken/unspoken rules, media use, food etiquette, eating behaviors), and how culture influences family meals (e.g. what is eaten, importance of family meals, frequency of family meals) in households with overweight/obese children and household with nonoverweight children. This study is innovated and significant. Specifically it will be the first to simultaneously examine qualitative differences and similarities of family meals based on child weight status. This study will increase understanding about how family meals differ among households with and without overweight/obese children, which may inform clinical recommendations and interventions for healthcare and public health workers who work with children and families. Further, results from this study could aid in the development of measures and future studies designed to increase knowledge about the risk and protective factors of childhood obesity.

A Qualitative Analysis of Family Meals: Are there Differences Between Households with Overweight and Nonoverweight Children?

Childhood overweight and obesity is considered one of the most serious public health challenges of the 21st century (World Health Organization, 2002) and is the focus of many public health efforts in the United States (McKinnon, Reedy, Berrigan, & Krebs-Smith, 2012; Wojcicki & Heyman, 2010). While there appear to be multiple contributing factors to childhood overweight and obesity, national committees agree that there needs to be further research on the behavioral and environmental causes of overweight and obesity (U.S. Department of Health and Human Services, 2001). Research suggests that some aspects of the home environment, such as the availability of healthful foods (Berge, 2009), parent feeding practices (Berge, 2009; Rhee, De Lago, Arschoff-Mills, Meht, & Davis, 2005) and parenting style (Berge, Wall, Bauer, & Neumark-Sztainer, 2010; Berge, Wall, Loth & Neumaark-Sztainer, 2010; Rhee, De Lago, Arschoff-Mills, Meht, & Davis, 2005) are protective against childhood obesity. There is also some evidence suggesting that frequent family meals are associated with lower child weight status, although results have not been consistent (Koletzko & Toschke, 2010). Specifically, it is unclear whether the food served at the meal or the emotional atmosphere during the meal is the main contributor to healthy weight status (Berge, et al., 2014a; Fulkerson, Neumark-Sztainer, Hannan & Story, 2008a; Gable, Chang, & Krull, 2007).

There are still many questions left to be answered about the home food environment and its influence on childhood overweight and obesity. While the quantitative results on family meals have helped identify risk and protective factors for childhood overweight and obesity in the home environment, additional qualitative research is needed to flesh out the existing research and to provide more in-depth insight into why family meals appear to be protective for some but not for others. To date, qualitative research on family meals has focused on the importance of family meals and the challenges of having family meals. However, none of these studies have compared households with overweight children and households with nonoverweight children.

The primary objective of this study is to identify family meal similarities and differences between ethnically/racially diverse families with overweight/obese children and families with nonoverweight children. To achieve this objective, qualitative data analysis of 118 interviews conducted during the Family Meals, LIVE! study (2012-2013) will be used (Berge, et al. 2014). The Family Meals, LIVE! study, which included a stratified sample based on child weight status, allows for identification of similarities and/or differences in households with overweight/obese versus nonoverweight children in regards to family meals.

Aim: Identify thematic clusters of individual and familial factors in the home environment that are potential risk or protective factors for childhood obesity. The specific research questions to be addressed are:

- **Research Question 1:** Do families with nonoverweight children in the household see family meals similar to or different from (e.g., importance of family meals, purpose of family meals, likes/dislikes) families with overweight/obese children in the household?

- **Research Question 2:** Do families with nonoverweight children in the household have similar or different rules around mealtimes (e.g., spoken/unspoken rules, media use, food etiquette, eating behaviors) when compared to families with overweight/obese children in the household?
- **Research Question 3:** How do families with nonoverweight children in the household view their culture influencing family meals (e.g., what is eaten, importance of family meals, frequency of family meals) compared to families with overweight/obese children in the household?

The **expected outcomes** of this study include increasing understanding of how family meals differ among households with and without overweight/obese children and using the findings to inform clinical recommendations and interventions for healthcare and public health workers who work with children and their families. Further, results from this study could aid in the development of measures and future studies designed to increase knowledge about some of the risk and protective factors associated with childhood obesity.

A. SIGNIFICANCE

A.1. What is the scope of the problem?

In 2011-2013 31.8% of youth, ages 2-19, were considered overweight or obese (Ogden, Carroll, Kit & Flegal, 2014). Among sub-groups, African-American, Hispanic, and low-income populations are at a higher risk for being overweight and obese (Lutfiyya, et al., 2008; Ogden, et al., 2010; Wang, & Beydoun, 2007). Overweight and obesity is associated with adverse health outcomes during childhood, including an increased risk for physical related problems such as difficulty breathing, hypertension, and insulin resistance (Ebbeling, Pawlak, Ludwig, 2002; World Health Organization, 2002) and emotional difficulties such as negative self-esteem (Swartz & Puhl, 2003; Schwimmer, Burwinkle, & Varni, 2003) depression, anxiety, and feelings of chronic rejection (Deckelbaum & Williams, 2001). Given that the prevalence of overweight and obesity has increased among youth, it is projected that premature onset of obesity-related disease is likely to rise (National Institutes of Health Obesity Research Task Force, 2011). With the known adverse physical and mental health outcomes and the associated healthcare costs of overweight and obesity (Tsai, Williamson & Glick, 2010), addressing factors that protect against or contribute to childhood overweight and obesity is important.

A.2. Why are family meals important?

A substantial body of research has examined associations between family meal frequency and childhood overweight and obesity. Cross-sectional and longitudinal studies show that children who eat family meals consume more fruits and vegetables (Cason, 2006; Christian, Evans, Hancock, Nykajaer, & Cade, 2013; Gable & Lutz, 2000; Neumark-Sztainer, Hannon, Story, Croll, & Perry, 2003; Videon & Manning, 2003), less saturated fat (Gonzales, Marshall, Heimendinger, Crane, & Neal, 2002) and have better overall diet quality (Gillman, et al., 2000). Studies have also found family meals are associated with lower levels of extreme weight-control behaviors (Neumark-Sztainer, Eisenberg, Fulkerson, Story & Larson, 2008; Jaffa, Honig, Farmer & Dilley, 2002) and better psychosocial health (Eisenberg, Olson, Neumark-Sztainer, Story & Bearinger, 2004; Rocket, 2007). The research looking at the association between family meal frequency and child weight status shows mixed results (Koletzko & Toschke, 2010).

While some studies show an inverse effect between family meal frequency and body mass index (BMI) (Berge et al., 2014a; Anderson & Whitaker, 2010; Gable, Chang, & Krull, 2007) other studies found no association (Woodruff, Hanning, McGoldrick, & Brown, 2010; Wurback, Zellner, & Kromeyer-Hauschild, 2009).

A.3. What unanswered questions remain regarding family meals and childhood obesity?

How do minority families with and without overweight children view family meals? A limited number of studies have found that family meals vary by socioeconomic status (McCurdy & Gorman, 2010; Neumark-Sztainer et al., 2003) and ethnicity (Rollins, Belue, & Francix, 2010; Skala et al, 2012). Studies have shown that lower income and ethnic group families participate in fewer family meal times and receive fewer benefits (Fitzpatrick, Edmunds, & Dennison, 2007; Neumark-Sztainer et al., 2003). While some of research has been conducted on these challenges (Fulkerson et al., 2011; Neumark-Sztainer et al., 2000; Hammons & Fiesae, 2011; Koulouglioti, Cole, & Moskow, 2011; Hoerr et al., 2005; Horodynski & Arndt, 2005) and benefits (Hoerr et al., 2005; Horodynski et al, 2009; Berge, Hoppmann, Hanson, Neumark-Sztainer, 2013) of family meals among minority families, we are unaware of any qualitative research examining the differences between minority families with and without overweight/obese children in the household. For example, do households without overweight children see more benefits of family meals than households with overweight/obese children?

What are rules around mealtimes? The rules that govern family meals appear to vary from family to family. For some family meals are structured events with a set time to eat, clearly defined roles, and expectations for conversation topics (Fiese, Foley, Spagnola, 2006). For others family meals are more laissez-faire where fewer rules are present. The literature notes that there are rules around the types of foods that can be eaten (Neumark-Sztainer, Story, Ackard, Moe, & Perry, 2000) and about restricting and/or encouraging eating (Puhl & Schwartz, 2003). However, the knowledge about specific family rules in households with and without overweight/obese children is lacking.

How does culture influence family meals? The literature addressing cultural influences on family meals mainly focuses on broad cultural influences over dietary patterns (Cutler, Flood, Hannan, & Neumark-Sztainer, 2011) and in comparing one culture, such as Mexican, to another culture, such as Anglo (Andaya, Arredondo, Alcaraz, Lindsay & Elder, (2011). A search of the literature found nothing on individual family culture and its influence over family meals.

A.5. Summary: How will successful Completion of the proposed study research questions drive the field?

1. The proposed study **aligns with the NIH Strategic Plan for Obesity Research** (National Institutes of Health Obesity Research Task Force, 2011), which calls for research that leads to understanding of the factors that contribute to obesity, especially in diverse ethnic/racial and low socioeconomic status groups.

2. Results will **provide a more representative and refined picture of family meals in households with overweight/obese children and those households without overweight/obese children** and will identify factors that may exacerbate or protect against childhood overweight/obesity.

3. Results will be used to **inform recommendations for healthcare providers and public health interventions as well as future research on childhood obesity.**

4. Results will **add to the empirical evidence and enhance current quantitative findings.**

5. Because this research is qualitative, it **may also bring insights not found in the quantitative-based family meal literature by delving into the everyday realities of family meals and finding the nuances of families' lived experiences** that are difficult to deduce from quantitative methods.

B. INNOVATION

The **innovation in the proposed study lies in the stratification of the sample into two groups:** households with children who are overweight and households with children who are nonoverweight. Previous research has not been able to identify why family meals may be protective for child weight status. Qualitative investigations, with large samples, that can stratify by child weight status are needed to address this inconsistency in the literature. Thus, the current study will be the first to simultaneously examine qualitative differences and similarities of family meals based on child weight status. Additionally, the study is linked to a mixed-methods study that utilized both direct observational methods, quantitative and qualitative methods to identify risk and protective factors for childhood obesity.

B.1. Theoretical Model. Family Systems Theory (FST) focuses on relational interactions between family members and the resulting connectedness or disengagement between family members (Doherty & McDaniel, 2010). Thus, this framework allows for exploring how the family system may influence health behaviors in children. The current study is guided by FST in understanding more about familial factors connected with family meals and child health. In addition, based on Bertalanffy's (1968) and Bateson's (1972) conceptualization of family rules,—that over time family members develop rules about how the family is governed—this study explores how family meal rules may differ in households with overweight/obese vs. nonoverweight children.

C. RESEARCH APPROACH

C.1. Study Overview. The proposed study utilizes data from Family Meals, LIVE! (Berge, et al., 2014) to address the research questions of the project. Family Meals, LIVE! was conducted through the University of Minnesota during 2012-2013. It was a two-year mixed-methods, cross-sectional study designed to identify key family home environment factors related to eating behaviors that increase or minimize the risk for childhood obesity. Participants were recruited through primary care clinics (N = 4) within the Department of Family Medicine and Community Health (DFMCH) in the Minneapolis/St. Paul Minnesota area. A flier was sent to the child's home inviting the family to participate in a study looking at the family and home influences on child eating behaviors and weight. Participants were eligible if they were between the ages of 6-12 years old, both the target child and his/her parent/guardian and family members could speak and read English, and the family ate regular dinner meals together (to ensure that families who "normally" ate family meals together were recruited). Families participated in two home visits, completed a survey, participated in a primary caregiver interview, gave dietary recalls, and were part of an observational measure of family functioning. Families who completed the study were compensated with an iPad 2. The University of

Minnesota's Institutional Review Board Human Subjects Committee approved all study procedures.

The study included 120 children (47% girls; mean age 9 years) and their primary care giver (92% women; means age: 35) from low-income and minority communities (see Table 1). Based on findings in the family meals literature, recruitment was stratified by weight status. Fifty percent of the sample was classified as overweight/obese (BMI = $\geq 85^{\text{th}}$ percentile) and 50% were nonoverweight (BMI $> 5^{\text{th}}$ and $< 85^{\text{th}}$ percentile). Of the 120 families who participated in the study, 118 primary caregivers participated in qualitative interviews. Trained research staff conducted the interviews with the primary caregiver during the second home visit. Each of the interviews lasted between 6 to 41 minutes. Due to technical difficulties two interviews were not recorded. Of the 118 families 50% (n = 59) of them were from homes with overweight/obese children and 50% (n = 59) were from homes with nonoverweight children.

C.2. Interview Development. Interview questions were developed based on information gathered during the Family Meals, LIVE! pilot study (Berge, Hoppmann, Hanson & Neumark-Sztainer, 2013). A qualitative interview guide was developed and used to help elicit caregivers' perspectives on 12 different family meal related topics (See Table 2). The questions were directive but open ended.

C.3. Qualitative Data Analysis. Audio-recorded interviews were transcribed verbatim and coded using inductive content analysis. Two members of the research team independently coded the interviews using NVivo 10 software (NVivo 10, 2014, QSR International Pty Ltd). Inter-rater reliability was established with both coders coding 10% of the interviews. Consistency between the coders was assessed using the formula: number of agreements divided by total number of agreements plus disagreements (Miles & Huberman, 1994). Inter-coder reliability was 97% to 99% among coders. Discrepancies were discussed between the two coders and the larger research team until 100% consensus was achieved (Miller & Crabtree, 1999). Initial coding of the interviews was done through line-by-line coding (Glaser, 1978) to establish initial codes and help separate the data into broad categories. Next the coders utilized axial coding to separate the categories into subcategories.

After completing the coding, the interviews were stratified into two groups based on child weight status. Fifty-nine interviews were categorized in the overweight/obese (BMI = $\geq 85^{\text{th}}$ percentile) group and 59 interviews were categorized into the nonoverweight group (BMI $> 5^{\text{th}}$ and $< 85^{\text{th}}$ percentile). Going forward, the data in each group will be further defined, developed, and refined through selective coding. Core concepts will be identified and sub-categories will be collapsed to form a storyline that describes the experience of family meals for families with overweight/obese children and families with nonoverweight children.

D. EXPECTED OUTCOMES

It is expected that through this study, there will be clearer understanding of the qualitative differences between family meals in households with overweight children and households without.

Table 1: Demographic Characteristics of Parents and Children in Family Meals, LIVE!

Parent	% (n)	Target Child	all ages % (n)
Sex		Sex	
Female	92% (110)	Female	47% (56)
Male	8.3% (10)	Male	53% (64)
Race		Race	
American Indian or Alaskan Native	5% (6)	American Indian or Alaskan Native	9% (11)
Asian	5% (6)	Asian	6% (7)
Black or African American	65% (78)	Black or African American	74% (89)
White	23% (28)	White	18% (22)
Mixed/Other	4% (5)	Mixed/Other	3% (3)
Age		Age	
mean (sd)	34.8 (7.5)	mean (sd)	8.9 (3.3)
BMI		BMI	
Obese (≥ 30)	40% (48)	Obese ($\geq 95\%$)	30% (36)
Overweight (25 to <30)	22% (26)	Overweight (85% to $< 95\%$)	20% (24)
Nonoverweight (<25)	38% (45)	Nonoverweight (5% to $<85\%$)	50% (60)
Overweight		Overweight	
Yes (≥ 25)	82% (98)	Yes ($\geq 85\%$)	50% (60)
No (<25)	18% (21)	No ($<85\%$)	50% (60)
Socio-Economic Status			
Low ($< \$20,000$)	52% (62)		
Low-Middle ($\$20,000$ to $< \$35,000$)	21% (25)		
Middle ($\$35,000$ to $< \$50,000$)	11% (13)		
Upper Middle ($\$50,000$ to $< \$75,000$)	10% (12)		
High ($\$75,000$ and greater)	6% (7)		
Missing	1% (1)		
Parent Education			
Less than High School	9% (11)		
High School or GED	41% (49)		
Vocational, Technical, or Trade	24% (28)		
Any College	24% (29)		
Other / Missing	3% (3)		
Work			
Full Time	31% (37)		
Part Time	18% (21)		
Home Caregiver	15% (18)		
Unemployed, but looking	16% (19)		
Not working for pay	25% (24)		
Missing	1% (1)		

Table 2: Research Questions and the Family Meals, LIVE! Interview Questions

Research Question

1. Do families with nonoverweight children in the household see family meals similarly or differently (e.g., importance of family meals, purpose of family meals, likes/dislikes) than families with overweight/obese children in the household?

2. Do families with nonoverweight children in the household have similar or different rules around mealtimes (e.g., spoken/unspoken rules, media use, food etiquette, eating behaviors) than families with overweight/obese children in the household?

3. How do families with nonoverweight children in the household view their culture influencing family meals (e.g., what is eaten, importance of family meals, frequency of family meals) compared to families with overweight/obese children in the household?

Family Meals, LIVE! Interview Questions

- What are some reasons why you have family meals?
- What do you like about family meals?
- What don't you like about family meals?
- What do your children like about family meals?
- What do your children NOT like about family meals?
- You may be aware that a lot of research has been conducted on family meals. What has been found is that having a family meal is protective for kids' school achievement, eating habits and even reducing risk behaviors such as smoking, drinking and sexual behavior. What is your opinion about why family meals matter so much?
- Some families have spoken and unspoken rules during mealtimes, such as you can't leave the table until you have finished everything on your plate, or you don't have to eat everything that is served as long as you try it. What are some of your spoken and unspoken
- How does your family handle electronic devices or other distractions at mealtimes?
- How does your cultural heritage inform your views about what is eaten at family meals, the frequency of family meals, behavior at family meals and the importance of family

Table 3. Timeline

Task	Dec 2014	Jan 2015	Feb 2015	Mar 2015	Apr 2015	May 2015	June 2015
Proposal Revisions							
Research Question 1: Collapse Sub- Categories, Define Core Concepts, Written Results							
Research Question 2: Collapse Sub- Categories, Define Core Concepts, Written Results							
Research Question 3: Collapse Sub- Categories, Define Core Concepts, Written Results							
Discussion							
Submit to committee for review							
Incorporate revisions							
Dissertation defense							

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